

Hamilton, Cynthia

From: Fuller, Kathleen
Sent: Friday, September 15, 2000 3:10 PM
To: Hamilton, Cynthia
Subject: LITIGATION SEARCH 5 707 780



HAM481.DOC

KATHLEEN FULLER 308-4290

?FI WPAT

QUESTEL - Time in minutes : 0,96
The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.76 USD
Cost estimated for the last database search :	0.76 USD
Estimated total session cost :	0.76 USD

Selected file: WPAT

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UP (basic) , UE (equiv) , UA (poly) , UB (chem) updates thru 2000-44
Year 2000: see INFO DWPI; New Content and DWPX: see INFO NEW-DWPI
Last database update : 2000/09/14 (YYYY/MM/DD)

Search statement 1

?/PN US5707780

** SS 1: Results 1

Search statement 2

?PRT MAX LEGALALL

1/1 WPAT - (C) Derwent
AN - 1997-052528 [05]
XA - C1997-017581
XP - N1997-043026
TI - Photohardenable compsn. with good green strength - contg. cationically
and free radical polymerisable cpds. photo-acid and free radical
initiator has low toxicity and low sensitivity to water
DC - A21 A89 E14 G06 P83 P84
PA - (DUPO) DU PONT DE NEMOURS & CO E I
IN - CASPAR JV; LAWTON JA; NEBE WJ; THOMMES GA
NP - 4
NC - 19
PN - WO9641239 A1 19961219 DW1997-05 G03F-007/029 Eng 38p *
AP: 1996WO-US08488 19960604
DSNW: JP
DSRW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
- US5707780 A 19980113 DW1998-09 G03F-007/028 9p
AP: 1995US-0476482 19950607; 1996US-0612509 19960307
- EP-830641 A1 19980325 DW1998-16 G03F-007/029 Eng
FD: Based on WO9641239
AP: 1996EP-0919045 19960604; 1996WO-US08488 19960604
DSR: DE FR GB
- JP11507090 W 19990622 DW1999-35 C08G-059/20 33p
FD: Based on WO9641239
AP: 1996WO-US08488 19960604; 1997JP-0501074 19960604
PR - 1995US-0476482 19950607; 1996US-0612509 19960307
CT - EP-207893; EP-425440; EP-535828; EP-605361; WO9001727
IC - C08F-020/00 C09D-004/02 C08G-059/20 G03F-007/028 G03F-007/029
B29C-067/00 C08F-002/50 C08G-059/40 G03C-009/08 G03F-007/027
G03F-007/038 G03F-007/26
AB - WO9641239 A
A photohardenable compsn. contains (i) a mixt. of cationically
polymerisable org. cpds., (ii) a blend of free radical polymerisable
org. cpds., (iii) a photoacid precursor, (iv) opt. a sensitiser, (v) a
free radical initiator and (vi) opt. water. The compsn. is used for
solid imaging and articles with increased initial green strength.

- Also claimed are: (i) a method of making an integral three dimensional article with increased green strength by controlling the diffusion of photoactivated molecular species in the areas of the above compsn. which are exposed; and (ii) a combination of a free radical initiator and a photoacid precursor for use in a photohardenable compsn..
- Pref. the sensitiser is 1,12 benzoperylene, 1,8-diphenyl-1,3,5,7-octatetrane, or 1, 6-diphenyl-1, 3, 5-hexatriene. Pref. the photoacid precursor is a triarylsulphonium salt and the free radical initiator is 4-(2-hydroxyethoxy)phenyl- (2-propyl) ketone. The blend of free-radical polymerisable cpds. contains at least one mono-functional and at least one multi-functional acrylic monomer. The mono-functional monomer is pref. caprolactone acrylate.
- USE - Photohardenable compsns. for solid imaging esp. with an Ar ion laser.
- ADVANTAGE - The compsn. has good speed and gives solid images with good resolution, accuracy and initial green strength. The compsn. has low toxicity and low sensitivity to water. (Dwg.0/0)

USAB- US5707780 A

- A photohardenable compsn. contains (i) a mixt. of cationically polymerisable org. cpds., (ii) a blend of free radical polymerisable org. cpds., (iii) a photoacid precursor, (iv) opt. a sensitiser, (v) a free radical initiator and (vi) opt. water. The compsn. is used for solid imaging and articles with increased initial green strength.
- Also claimed are: (i) a method of making an integral three dimensional article with increased green strength by controlling the diffusion of photoactivated molecular species in the areas of the above compsn. which are exposed; and (ii) a combination of a free radical initiator and a photoacid precursor for use in a photohardenable compsn..
 - Pref. the sensitiser is 1,12 benzoperylene, 1,8-diphenyl-1,3,5,7-octatetrane, or 1, 6-diphenyl-1, 3, 5-hexatriene. Pref. the photoacid precursor is a triarylsulphonium salt and the free radical initiator is 4-(2-hydroxyethoxy)phenyl- (2-propyl) ketone. The blend of free-radical polymerisable cpds. contains at least one mono-functional and at least one multi-functional acrylic monomer. The mono-functional monomer is pref. caprolactone acrylate.
 - USE - Photohardenable compsns. for solid imaging esp. with an Ar ion laser.
 - ADVANTAGE - The compsn. has good speed and gives solid images with good resolution, accuracy and initial green strength. The compsn. has low toxicity and low sensitivity to water. (Dwg.0/0)

MC - CPI: A08-C01 A08-D01 A11-C02B A12-L02C E10-A01 E10-E04M1 G06-D04
G06-F03B G06-F03C G06-F03D

UP - 1997-05

UE - 1998-09; 1998-16; 1999-35

1/3 LGST - (C) LEGSTAT

PN - EP 830641 [EP-830641]

AP - EP 96919045/96 19960604 [1996EP-0919045]

DT - EP-P

ACT - 19960604 EP/AE-A

EP-APPLICATION

EUROPAEISCHE ANMELDUNG

{EP 96919045/96 19960604 [1996EP-0919045]}

- 19980325 EP/AK-A1 [+]

DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH REPORT:

IN EINER ANMELDUNG BENANNTE VERTRAGSSTAATEN

DE FR GB

- 19980325 EP/A1 [+]

PUBLICATION OF APPLICATION WITH SEARCH REPORT

VEROEFFENTLICHUNG DER ANMELDUNG MIT RECHERCHENBERICHT

- 19980325 EP/17P [+]

REQUEST FOR EXAMINATION FILED

PRUEFUNGSANTRAG GESTELLT

971110

- 19981209 EP/17Q [+]

FIRST EXAMINATION REPORT

ERSTER PRUEFUNGSBESCHEID

981026

- 19991201 EP/RAP1
APPLICANT REASSIGNMENT (CORRECTION)
ANMELDER UEBERTRAGUNG (KORR.)
DSM N.V.

UP - 1999-48

2/3 LGST - (C) LEGSTAT

PN - US 5707780 [US5707780]

AP - US 612509/96 19960307 [1996US-0612509]

DT - US-P

ACT - 19960307 US/AE-A

APPLICATION DATA (PATENT)

{US 612509/96 19960307 [1996US-0612509]}

- 19980113 US/A

PATENT

- 19990604 US/AS02

ASSIGNMENT OF ASSIGNOR'S INTEREST

DSM, N.V. 6411 TE HEERLEN, NETHERLANDS * E.I. DU PONT DE NEMOURS AND
COMPANY : 19990429

- 20000418 US/RF

REISSUE APPLICATION FILED

20000111

UP - 2000-17

3/3 LGST - (C) LEGSTAT

PN - WO 9641239 [WO9641239]

AP - WO 9608488/96(US) 19960604 [1996WO-US08488]

DT - WO-P

ACT - 19960604 WO/AE-A

APPLICATION DATA

{WO 9608488/96(US) 19960604 [1996WO-US08488]}

- 19961219 WO/AK-A1 [+]

DESIGNATED STATES CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT
JP

- 19961219 WO/AL-A1 [+]

DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A PUBLISHED
APPLICATION WITH SEARCH REPORT

AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

- 19961219 WO/A1 [+]

PUBLICATION OF THE INTERNATIONAL APPLICATION WITH THE INTERNATIONAL
SEARCH REPORT

- 19970416 WO/121

EP: PCT APP. ART. 158 (1)

- 19970821 WO/DFPE

REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH
MONTH FROM PRIORITY DATE

- 19971203 WO/ENP-A

ENTRY INTO THE NATIONAL PHASE IN:

<JP 97501074>

UP - 1998-51

1/1 CRXX - (C) CLAIMS/RRX

PN - 5,707,780 A 19980113 [US5707780]

PA - Du Pont de Nemours, E I & Co

ACT - 19990604 REASSIGNED

ASSIGNMENT OF ASSIGNOR'S INTEREST

Assignor: E.I. DU PONT DE NEMOURS AND COMPANY DATE SIGNED: 04/29/1999

Assignee: DSM, N.V. 6411 TE HEERLEN, NETHERLANDS

Reel 009996/Frame 0898

Contact: PILLSBURY MADISON & SUTRO LLP RUTH N. MORDUCH, IP GROUP 1100

NEW YORK AVENUE, N.W. NINTH FLOOR, EAST TOWER WASHINGTON, D.C.
20005-3918

- 20000111 REISSUE REQUESTED
Issue Date of O.G.: 20000318
Reissue Request Number: 09/481654
Examination Group responsible for Reissue process: 1752

1/1 PAST - (C) PAST
AN - 200016-001025
PN - 5707780 A [US5707780]
OG - 2000-04-18
ACT - REISSUE APPLICATION FILED

Search statement 2

?FI INPD

WPAT - Time in minutes : 0,84
The cost estimation below is based on Questel's
standard price list

Estimated cost :	1.97 USD
Records displayed and billed :	1
Estimated cost :	1.29 USD
Cost estimated for the last database search :	3.26 USD
Estimated total session cost :	4.02 USD

LGST - Time in minutes : 0,13
The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.13 USD
Records displayed and billed :	3
Estimated cost :	4.68 USD
Cost estimated for the last database search :	4.81 USD
Estimated total session cost :	8.83 USD

CRXX - Time in minutes : 0,07
The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.12 USD
Records displayed and billed :	1
Estimated cost :	3.28 USD
Cost estimated for the last database search :	3.40 USD
Estimated total session cost :	12.23 USD

PAST - Time in minutes : 0,07
The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.11 USD
Records displayed and billed :	1
Estimated cost :	4.77 USD
Cost estimated for the last database search :	4.88 USD
Estimated total session cost :	17.11 USD

LITA - Time in minutes : 0,02
The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.03 USD
Cost estimated for the last database search :	0.03 USD
Estimated total session cost :	17.14 USD

Selected file: INPD

You are now connected to INPADOC
Covers 1968/1973 thru weekly updates (2000-36)
For information on content, ..INFO INPD.

Search statement 1

?FAM US5707780/PN

** SS 1: Results 4

Search statement 2

?FAMSTAT MAX

1/4 INPD - (C) INPADOC

PN - EP 830641 A1 19980325 [EP-830641]
TI - PHOTOHARDENABLE EPOXY COMPOSITION
LA - ENG
IN - LAWTON JOHN ALAN [US]; NEBE WILLIAM JOHN [US]; THOMMES GLEN ANTHONY
[US]; CASPAR JONATHAN V [US]
PA - DU PONT [US]
AP - EP 96919045/96-A 19960604 [1996EP-0919045]
PR - WO 9608488/96(US)-W 19960604 [1996WO-US08488]
- US 476482/95-A 19950607 [1995US-0476482]
IC - G03F-007/029; G03C-009/08; B29C-067/00
DS - DE* FR* GB*

1/1 LEGALI - (C) LEGSTAT

PN - EP 830641 [EP-830641]
AP - EP 96919045/96 19960604 [1996EP-0919045]
DT - EP-P
ACT - 19960604 EP/AE-A
EP-APPLICATION
EUROPAEISCHE ANMELDUNG
{EP 96919045/96 19960604 [1996EP-0919045]}
- 19980325 EP/AK-A1 [+]
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH REPORT:
IN EINER ANMELDUNG BENANNT VERTRAGSSTAATEN
DE FR GB
- 19980325 EP/A1 [+]
PUBLICATION OF APPLICATION WITH SEARCH REPORT
VEROEFFENTLICHUNG DER ANMELDUNG MIT RECHERCHENBERICHT
- 19980325 EP/17P [+]
REQUEST FOR EXAMINATION FILED
PRUEFUNGSANTRAG GESTELLT
971110
- 19981209 EP/17Q [+]
FIRST EXAMINATION REPORT
ERSTER PRUEFUNGSBESCHEID
981026
- 19991201 EP/RAP1
APPLICANT REASSIGNMENT (CORRECTION)
ANMELDER UEBERTRAGUNG (KORR.)
DSM N.V.
UP - 1999-48

2/4 INPD - (C) INPADOC

PN - JP 11507090 T2 19990622 [JP11507090]
AP - JP 501074/96-A 19960604 [1996JP-0501074]
PR - WO 9608488/96(US)-W 19960604 [1996WO-US08488]
- US 476482/95-A 19950607 [1995US-0476482]

IC - C08G-059/20; C08F-002/50; C08G-059/40; G03F-007/027; G03F-007/038;
C08F-020/00; C09D-004/02

3/4 INPD - (C) INPADOC

PN - US 5707780 A 19980113 [US5707780]
TI - PHOTOHARDENABLE EPOXY COMPOSITION
IN - LAWTON JOHN ALAN [US]; NEBE WILLIAM JOHN [US]; THOMMES GLEN ANTHONY
[US]; CASPAR JONATHAN V [US]
PA - DU PONT [US]
AP - US 612509/96-A 19960307 [1996US-0612509]
PR - US 612509/96-A 19960307 [1996US-0612509]
- US 476482/95-B3 19950607 [1995US-0476482]
IC - G03F-007/028; G03F-007/26

1/1 LEGALI - (C) LEGSTAT

PN - US 5707780 [US5707780]
AP - US 612509/96 19960307 [1996US-0612509]
DT - US-P
ACT - 19960307 US/AE-A
APPLICATION DATA (PATENT)
{US 612509/96 19960307 [1996US-0612509]}
- 19980113 US/A
PATENT
- 19990604 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
DSM, N.V. 6411 TE HEERLEN, NETHERLANDS * E.I. DU PONT DE NEMOURS AND
COMPANY : 19990429
- 20000418 US/RF
REISSUE APPLICATION FILED
20000111
UP - 2000-17

4/4 INPD - (C) INPADOC

PN - WO 9641239 A1 19961219 [WO9641239]
TI - PHOTOHARDENABLE EPOXY COMPOSITION
LA - ENG
IN - LAWTON JOHN ALAN; NEBE WILLIAM JOHN; THOMMES GLEN ANTHONY; CASPAR
JONATHAN V
PA - DU PONT [US]
AP - WO 9608488/96(US)-A 19960604 [1996WO-US08488]
PR - US 476482/95-A 19950607 [1995US-0476482]
IC - G03F-007/029; G03C-009/08; B29C-067/00
DS - JP* AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

1/1 LEGALI - (C) LEGSTAT

PN - WO 9641239 [WO9641239]
AP - WO 9608488/96(US) 19960604 [1996WO-US08488]
DT - WO-P
ACT - 19960604 WO/AE-A
APPLICATION DATA
{WO 9608488/96(US) 19960604 [1996WO-US08488]}
- 19961219 WO/AK-A1 [+]
DESIGNATED STATES CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT
JP
- 19961219 WO/AL-A1 [+]
DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A PUBLISHED
APPLICATION WITH SEARCH REPORT
AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
- 19961219 WO/A1 [+]
PUBLICATION OF THE INTERNATIONAL APPLICATION WITH THE INTERNATIONAL
SEARCH REPORT
- 19970416 WO/121
EP: PCT APP. ART. 158 (1)

- 19970821 WO/DFPE
REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH
MONTH FROM PRIORITY DATE
- 19971203 WO/ENP-A
ENTRY INTO THE NATIONAL PHASE IN:
<JP 97501074>
UP - 1998-51

Search statement 2

>>>

Please TRANSMIT the NAME of the file you want to search. To see a description
of a file, type its page number and press the TRANSMIT key.

FILES - PAGE 1 of 7 (NEXT PAGE for additional files)

NAME	PG	DESCRIP	NAME	PG	DESCRIP
<---CASES & ADMINISTRATIVE DECISIONS-->			<-----PATENTS GROUP FILES----->		
IPOMNI	1	Int Prop Cases & Reg Matl	ALL	4	UTIL, DESIGN, PLANT, SIR,
PTOMNI	1	FEDCTS, PTO, ITC, ALLREG			REEEXAM & REISS
CASES	1	FEDCTS, PTO & ITC	ALLPAT	4	Comb. ALL & INTPAT
FEDCTS	2	Patent cases from Fed. Cts.	<-----U.S. PATENTS----->		
CCPA	2	Ct Customs & Patent Appeals	UTIL	4	Full Text Patents from 1971*
CAFC	2	Patent cases from Fed. Cir.	DESIGN	4	Full Text Patents from 1976
PTO	2	PATAPP & COMMR	PLANT	4	Full Text Patents from 1976
<-----SECONDARY SOURCES----->					
IPLTR	5	Intell Prop Law Nwltrs			
IPLR	5	Intell Prop Law Rev Articles			

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* Selected coverage 1/15/71 to 12/3/74

Please type your search request then press the TRANSMIT key.
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Type .fr to enter a FREESTYLE(TM) search.

For further explanation, press the H key (for HELP) and then the TRANSMIT key.
>>>

PATNO IS 5707780

If it is not what you intended to enter, please press the STOP key.
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PATNO IS 5707780

Your search request has found 1 PATENT through Level 1.
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To MODIFY your search request, press the M key (for MODIFY) and then the TRANSMIT key.

For further explanation, press the H key (for HELP) and then the TRANSMIT key.
>>>

LEVEL 1 - 1 OF 1 PATENT

<5,707,780>

Jan. 13, 1998

Photohardenable epoxy composition

REISSUE: Reissue Application filed Jan. 11, 2000 (O.G. Apr. 18, 2000) Ex. Gp.:
1752; Re. S.N. 09/481,654

INVENTOR: Lawton, John Alan, Landenberg, Pennsylvania

Nebe, William John, Wilmington, Delaware
Thommes, Glen Anthony, Wilmington, Delaware
Caspar, Jonathan V., Greenville, Delaware

ASSIGNEE-AT-ISSUE: E. I. Du Pont de Nemours and Company, Wilmington, Delaware
(02)

ASSIGNEE-AFTER-ISSUE: Date Transaction Recorded: Jun. 04, 1999
ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).
DSM, N.V. 6411 TE HEERLEN, NETHERLANDS
Reel & Frame Number: 009996/0898
>>>

Pat. No. 5707780, *

APPL-N0: 612,509

FILED: Mar. 7, 1996

REL-US-DATA:

Division of Ser. No. 476,482, Jun. 7, 1995 now abandoned

INT-CL: [6] G03F 7#028; G03F 7#26

US-CL: 430#280.1; 430#269; 430#945; 522#2; 522#170; 264#401

CL: 430;522;264

SEARCH-FLD: 430#945, 280.1, 269; 522#2, 170; 264#401

REF-CITED:

U.S. PATENT DOCUMENTS

Re. 29,131	2/1977	*	Smith et al.	260#77.5AN
3,450,613	6/1969	*	Steinberg	204#159.15
4,026,705	5/1977	*	Crivello et al.	96#27R

>>>

Pat. No. 5707780, *

4,069,054	1/1978	*	Smith	96#115P
4,113,895	9/1978	*	Watt et al.	427#44
4,138,255	2/1979	*	Crivello	96#35.1
4,156,035	5/1978	*	Tsao et al.	427#44
4,173,476	11/1979	*	Smith et al.	430#280
4,245,029	1/1981	*	Crivello	430#280
4,250,053	2/1981	*	Smith	252#426
4,291,114	9/1981	*	Berggren et al.	430#253
4,442,197	4/1984	*	Crivello et al.	430#280
4,504,374	3/1985	*	Lewarchik et al.	204#181C
4,624,912	11/1986	*	Zweifel et al.	430#258
4,668,601	5/1987	*	Kistner	430#162
4,694,029	9/1987	*	Land	522#8
5,055,439	10/1991	*	Allen et al.	502#158
5,059,512	10/1991	*	Babich et al.	430#280.1
5,182,056	1/1993	*	Spence	264#22
5,384,339	1/1995	*	Starkey	522#3
5,476,748	12/1995	*	Steinmann et al.	430#269
5,573,889	11/1996	*	Hofman et al.	430#285.1

>>>

Pat. No. 5707780, *

FOREIGN PATENT DOCUMENTS

2111718	12/1993	*	Canada	G03#F7028
0 360 869 A1	2/1989	*	European Patent Office (EPO)	C08#G5.968

OTHER PUBLICATIONS

Kubisen et al, Chemical Abstracts, vol. 104, Entry: 150835, p. 99, year 1986, Abstract of Radcure '84, Conf. Proc; 8th (1984), May 22-May 31.

PRIM-EXMR: Hamilton, Cynthia

CORE TERMS: composition, epoxy, acid, layer, exposure, green strength, ratio, free radical, region, concentration, resin, viscosity, polymerization, acrylate, photohardenable, wavelength, initiator, exposed, monomer, imaged, precursor, coefficient, extinction, mixture, photo-generated, mix, humidity, acrylic, minute, photo-generating

ABST:

A photohardenable composition especially suitable for use in solid imaging.
>>>

Pat. No. 5707780, *

The compositions are characterized by their improved photospeed in combined with excellent initial green strength. The compositions allows for the production of articles by solid imaging processing techniques that show little or no distortion, high accuracy, excellent clarity. The compositions are low in toxicity and have low sensitivity to water.

NO-OF-CLAIMS: 2

EXMPL-CLAIM: <=> 1,2

NO-OF-FIGURES: 0

NO-DRWNG-PP: 0

PARCASE: This is a division of application Ser. No. 08/476,482, filed Jun. 7, 1995, now abandoned.

SUM:

This invention relates to photohardenable compositions especially suitable for use in solid imaging. The compositions are formulated to control the diffusion such that the photo-generated initiators of the polymerization are